Liftavator, Inc., 5299 Enterprise Drive, Lockport, New York 14094

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SECTION 14421

HYDRAULIC VERTICAL PLATFORM LIFT

***** Since 1982 Lift-Avator, Inc. has provided limited use/limited application (LU/LA) elevators, residential elevators, hydraulic vertical platform wheelchair lifts, and inclined folding seats. These products are suitable for creating barrier free environments in both new and existing construction.

The specification section is organized by placing information in three standard parts:

<u>PART 1 - GENERAL</u> Describes administrative and procedural requirements.

<u>PART 2 - PRODUCTS</u> Describes materials, products, and accessories to be

incorporated into the construction project.

<u>PART 3 - EXECUTION</u> Describes how the products will be installed at the construction site.

PART 1 - GENERAL

1.1 **SUMMARY**

**** <u>Verti-Lift</u> can be provided with either metal or plexiglass enclosure panels or the tower enclosure can be site constructed from studs and gypsum board or concrete unit masonry. *****

- A. Section includes: Hydraulic, vertical platform, self-supporting, wheelchair lift complete with, platform, hydraulic drive unit, controller, gates, and hardware.
- B. Related sections:
 - 1. Section 03300 Cast-in-Place Concrete: Recessed slab to support vertical lift.
 - 2. [Section 04800 Masonry Assemblies] [Section 06100 Rough Carpentry] [Section 09260 Gypsum Board Assemblies]: Construction of vertical lift enclosure walls.
 - 3. Division 16000 Electrical: Electrical service for lift, conduit, disconnect switch, and auxiliary contacts for battery operation.

1.2 REFERENCES

A. American Society of Mechanical Engineers (ASME) and American National

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Standards Institute (ANSI): ASME/ANSI A17.1 - Safety Code for Elevators, Dumbwaiters, Escalators, and Moving Stairs; Section 2000.

- B. International Code Council (ICC) and American National Standards Institute (ANSI): ICC/ANSI A117.1 Standard on Accessible and Useable Buildings and Facilities.
- C. National Fire Protection Association (NFPA): NFPA 70 National Electric Code.

1.3 SUBMITTALS

- A. Provide in accordance with Section 01330 Submittal Procedures:
 - 1. Product data for principal components with descriptions of features, performance and operating characteristics, electrical characteristics, controls, and connection requirements.
 - 2. Shop drawings: Present plans, elevations, sections, and details showing dimensions, clearances, tolerances, component locations, control diagrams, loadings, and installation details.
 - 3. Samples of exposed finishes.
 - 4. Copy of warranty required by Paragraph 1.5 for review by Architect.
 - 5. Copy of maintenance contract required by Paragraph 1.6 for review by Owner and Architect.
- B. Provide in accordance with Section 01778 Closeout Submittals: Operation and maintenance manuals.

1.4 QUALITY ASSURANCE

- A. Perform work in accordance with ASME/ANSI A18.1 and NFPA 70.
- B. Design and installation shall conform to ICC/ANSI A117.1 [_____] for provisions for physically handicapped.
- D. Products requiring electrical connection shall comply with NFPA 70 and be listed by Underwriters' Laboratories, Inc. (UL) as suitable for the purpose indicated.
- E. Qualifications:
 - 1. Manufacturer: Company specializing in manufacture of hydraulic vertical platform lifts with 20 years minimum documented experience.
 - 2. Installer: Either employee or certified installer of lift manufacturer.

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1.5 WARRANTY

A. Provide in accordance with Section 01780 - Closeout Submittals: 5 years parts warranty.

1.6 MAINTENANCE SERVICE

- A. Furnish maintenance service for platform lift system for one year from date of Substantial Completion.
- B. Examine system components bi-annually. Clean, adjust, and lubricate equipment.
- C. Repair or replace parts whenever required. Use parts produced by manufacturer of original equipment.
- E. Provide emergency call service with 24 hours response.
- G. Perform maintenance work using competent and qualified personnel under supervision and employ of original installer.
- H. Maintenance contract shall be renewable and shall not be assigned or transferred without prior written consent of Owner.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURER

- A. Lift-Avator, Inc., 5299 Enterprise Drive, Lockport, New York 14094; 800-660-2629; www.liftavator.com.
- B. Requests to use equivalent products of other manufacturers shall be submitted in accordance with Section 01630 Product Substitution Procedures.

2.2 VERTICAL PLATFORM LIFT

<u>Model VL2 Verti-Lift</u>: 34 by 54 inches (850 by 1,371 mm) platform with double back-to-back openings to be installed in 50 by 55 inches (1,270 by 1,397 mm) site constructed enclosure tower.

Refer to Lift-Avator product literature for lift configurations and opening placement. Contact Lift-Avator, Inc. for non-standard sizes and custom designs. Edit the following paragraphs to reflect hydraulic lift model required for project. *****

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	A.	A. Type: Hydraulic, vertical platform, self-supporting, wheelchair lift complete platform, hydraulic drive unit, controller, gates, hardware, Verti-Lift Model [] as manufactured by Lift-Avator, Inc.							
	B.	Platform size: [] by [] [inches] [mm].							
	C. Rated net capacity: [750 pounds] [340 kg].								
	D.	Rated speed: [20 feet] [6 m] per minute.							
****	Ma	ximum travel distance is 12 feet (7.6 m). *****							
	E.	Travel distance: Up to 12 ft standard Rises up to 16 ft with varience							

- F. Number of levels serviced: Up to 4
- G. Number of car openings: [2 back-to-back]
- H. Platform: Steel framed platform with manufacturer's standard non-skid surface.
- I. Car: steel framed enclosure panels with panel inserts. Mount on car enclosure panel:
 - 1. [1 inch] [5 mm] square tube handrail with end returns.
 - 2. Car operating panel.

J. Operation:

- 1. Car operating panel: Stainless steel panel with constant pressure buttons or rocker switches, emergency stop/alarm button, on/off key switch, and emergency light.
- 2. Call stations: Provide key controlled call stations with stainless steel plates for both landings.
- 3. Emergency operation: Provide battery operated light fixture, lowering device, and alarm for use in event of power failure. Battery to be rechargeable with automatic recharging system.

2.3 ENCLOSURE

A. Type: Tower enclosure site constructed with [concrete unit masonry specified in Section 04800 - Masonry Assemblies.] [Metal stud and gypsum partitions specified in Section 09260 - Gypsum Board Assemblies.] [Wood stud and gypsum partitions specified in Section 06100 - Rough Carpentry and Section 09260 - Gypsum Board Assemblies].

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****	Minimum	height of	i enclosure	panels at upper	r level is 4	42 inche	es (1,219 mm).	****
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- A. Enclosure panel height: [As detailed on Drawings.]
 - 1. Lower level: [Full height] [].
 - 2. Upper level: [42 inches] [1,219 mm] [].
- B. Enclosure gates: Provide steel framed panel gates for upper and lower levels as indicated on approved shop drawings.
 - 1. Size: [34 inches] [864 mm] wide by [54 inches] [1,219 mm] high.
 - 2. Hardware: Spring hinges and lever handle latch set.
 - 3. Provide stainless steel kick plates on both sides of gate.
 - 4. Provide upper level gates with adjustable steel fascia extending into enclosure well.
- C. Enclosure door assembly: Manually operated, swinging, hollow steel, flush door and frame assembly; EZ Entry Door as manufactured by Lift-Avator, Inc.
 - 1. Size: [34 by 80 inches] [864 by 2032 mm].
 - 2. Hardware: Adjustable hydraulic delayed action closer and lever handle latchset.
 - 3. Vision light: Clear acrylic panel of size indicated on approved shop drawings.
 - 4. Provide stainless steel kick plates on both sides of door.
- D. Equip gate and door assemblies with electro-mechanical interlocks to prevent opening when lift is not at landing.

2.4 EQUIPMENT

- A. Equip lift with pre-wired pumping unit and control located within lift enclosure and providing:
 - 1. Smooth stopping at each landing.
 - 2. Adjustable pressure relief valve.
 - 3. Manually operated down valve to lower lift in emergency. Locate valve in key locked boxed located outside enclosure.

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- 4. Manually operated pressure gage isolating valve.
- 5. Gate valve to isolate cylinder from pump unit.
- 6. Electric solenoid for down direction control.
- 7. Emergency lowering by battery poser operated from car control.
- B. Cylinder: Steel pipe with cylinder head, internal guide ring, and self-adjusting packing.
- C. Plunger: Steel shaft with welded stop to prevent plunger from leaving cylinder. Drive system is direct acting. Cables, chains, screw systems unacceptable.
- D. Leveling device; Anti-creep mechanism to maintain platform level within [1/2 inch] [13 mm] of top landing. Locate leveling device and limit switches in position inaccessible to unauthorized persons. Micro switches are not acceptable.
- E. Roller guides.
- F. Call stations: Provide key controlled call stations with stainless steel plates for both landings.
- G. Terminal stopping devices: Provide devices at top and bottom of runway to stop car automatically. Micro switches are not acceptable.
- H. Guide rails and brackets: Steel channel rails to guide platform and sling. Rails shall be integral part of structure and enclosure ensuring stability and minimum platform deflection.
- I. Car sling: Fabricated from steel tubing and bracing to support platform and car enclosure. Equip with 3 inches diameter roller guides to engage guide rails. Sling arms shall be detachable.
- J. Electrical components: Conform to NFPA 70. Wiring shall have flame retardant and moisture proof outer covering. Run wiring in conduit or wireway outside enclosure. Provide quick disconnect harnesses.

PART 3 - EXECUTION

3.1 PREPARATION

A. Coordinate work with other trades to ensure proper timing and sequencing and to avoid delays. Provide inserts and other anchorage devices for proper installation in concrete floors and walls. Coordinate requirements for structural attachment of rails.

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B. Examine and verify site conditions and dimensions to verify lift can be properly installed. Do not proceed until deficiencies have been corrected.

3.2 INSTALLATION

- A. Install lift in accordance with manufacturer's instructions and approved shop drawings.
- B. Install cylinder/plunger unit plumb and accurately centered for car position and travel. Anchor securely in place.
- C. Connections: Welded unless bolted connections are required for subsequent removal for inspection, maintenance, adjustment, or replacement of parts.
- D. Cleaning: Remove protective coverings from finished surfaces. Clean surfaces and components.

3.3 TESTING AND DEMONSTRATION

- A. Upon completion and prior to permitting use of lift, perform tests to verify load rating and safety factors meet or exceed ASME A17.1 specifications.
- B. Correct, adjust, and retest as required.
- C. Instruct Owner in proper use, operation, and maintenance of lift. Review emergency provisions and procedures for checking malfunctions.

END OF SECTION